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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,436	01/20/2004	W. Thomas Novak	NIKOP036/PA0498	3037
22434	7590	07/22/2005	00/04682	
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			EXAMINER NELSON, VIVIAN HSU	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/761,436

**Applicant(s)**

NOVAK, W. THOMAS

**Examiner**

Vivian Nelson

**Art Unit**

2851

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Drawings***

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being unpatentable in view of Jasper (patent #6674510).

3. For claims 1-3 Jasper teaches a lithographic projection apparatus 100 that comprises: a projection station 20 that projects a pattern on the wafer  $W_L$  and  $W_R$  arranged on the stage 14L and 14R (column 5, lines 52-57); a first measuring station 10L and a second measuring station 10R that include wafer height sensors (11L and 11R, respectively) and stage height sensors (12L and 12R, respectively), which serve to measure a height of a wafer  $W_L$  and  $W_R$  and a height of a

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reference plane 141 of the stage 14L and 14R (col. 5, lines 38-47 and level sensor col. 7, lines 21-27). The control unit 50 that controls said projection station 20 according to the height of the wafer and the height of the stage are referred to in column 6, lines 8-11 of Jasper. Further, a transporter that transports the stage 14L and 14R perpendicularly to said incidence direction between said first measuring station 10L and said projection station 20 and between said second measuring station 10R and said projection station 20 is outlined in column 3, lines 5-12 and in column 6, lines 23-27.

4. The lithographic projection method (claim 4) is also taught by Jasper as following:

providing a projection station 20 for projecting a pattern on a wafer  $W_L$  and  $W_R$  arranged on a stage 14L and 14R, respectively, by a projection beam incident in an incidence direction and a pair of measuring stations consisting of a first measuring station 10L and a second measuring station 10R said first measuring station 10L including a first wafer height sensor 11L and a first stage height sensor 12L, said second measuring station 10R including a second wafer height sensor 11R (col. 2, lines 66-67 and col. 3, lines 1-4; col. 5, lines 38-57) ;

introducing into said first measuring station 10L a first stage 14L carrying a first wafer  $W_L$  thereon, measuring a height of said first wafer  $W_L$  in said incidence direction with said first wafer height sensor 11L, and measuring a height of a reference plane 141 of said first stage with said first stage height sensor 12L by emitting light in a direction perpendicular to said incidence direction toward said reference plane 141 of said first stage 14L and also toward said projection station 20 (col. 12, lines 14-23 and Fig. 8);

thereafter transporting said first stage 14L with said first wafer  $W_L$  thereon into said projection station 20 while continuously measuring the height of the reference plane 141 of said

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first stage 14L with said first stage height sensor 12L, and projecting said pattern on said first wafer  $W_L$  arranged on said first stage 14L by said projection beam incident in said incidence direction (col. 3, lines 37-48);

introducing into said second measuring station 10R a second stage 14R carrying a second wafer  $W_R$  thereon, measuring a height of said second wafer  $W_R$  in said incidence direction with said second wafer height sensor 11R, and measuring a height of a reference plane 141 of said second stage 14R with said second stage height sensor 12R by emitting light in a direction perpendicular to said incidence direction toward said reference plane 141 of said second stage 14R and also toward said projection station 20 (col. 1, lines 38-43 and col. 3, lines 37-48); and

thereafter transporting said first stage 14L with said first wafer  $W_L$  thereon out of said projection station 20, transporting said second stage 14R with said second wafer  $W_R$  thereon into said projection station 20 while continuously measuring the height of the reference plane 141 of said second stage 14R with said second stage height sensor 12R, and projecting said pattern on said second wafer  $W_R$  arranged on said second stage 14R by said projection beam incident in said incidence direction (col. 27, lines 18-24).

5. Similarly, Jasper also describes a lithography system (claim 5) comprising: an illumination source (col. 5, lines 31-33); an optical system (col. 5, lines 52-57); a reticle stage arranged to retain a reticle (col. 5, lines 34-37); and

a working stage including a projection station 20 that projects a pattern from said reticle on the wafer arranged on the stage by the projection beam incident in an incidence direction, and a first measuring station 10L and a second measuring station 10R that are arranged oppositely with respect to said projection station 20 and each serve to measure a height of a wafer and a

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height of a reference plane 141 of the stage, said first measuring station 10L including a first wafer height sensor 11L and a first stage height sensor 12L, said second measuring station 10R including a second wafer height sensor 11R and a second stage height sensor 12R, said first wafer height sensor 11L and said second wafer height sensor 11R each serving to measure the height of a wafer in said incidence direction, said first stage height sensor 12L and said second stage height sensor 12R emitting light generally towards said projection station 20 and thereby measuring the height of the stage (Fig.1; col. 5, lines 38-47 and level sensor col. 7, lines 21-27).

6. An enclosure that surrounds at least a portion of the working stage, the enclosure having a sealing surface (claim 6) can be seen in Figure 1 of Jasper.

7. Claim 7 described as an “object manufactured with the lithography system of claim 5” is rejected as being an inherent teaching of the apparatus (see Jasper patent #6674510).

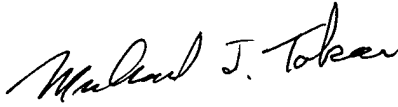
8. A “wafer on which an image has been formed by the lithography system” (claim 8) is illustrated in Jasper Figure 1.

9. Claims 9-10 outlining a method for a) making an object and b) patterning a wafer using a lithography process, which utilizes the lithography system from claim 5, are also rejected as being inherent teachings of the apparatus (see Jasper patent #6674510).

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

vhn

  
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